

U.S. Patent Application Serial No. 09/663,709
Amendment dated June 9, 2004
Reply to OA of **March 9, 2004**

REMARKS

Claims 1, 3 and 7 are pending in this application. Claims 2, 4 and 8 have been canceled without prejudice or disclaimer. Claim 1 has been amended. Applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated **March 9, 2004**.

Support for the amendment to claim 1 may be found in canceled claim 2.

Claims 1-4, 7 and 8 are rejected under 35 U.S.C. §102(b) as being anticipated by Yokoyama et al. (*Biosci. Biotech. Biochem.* vol. 56, no. 10, pp. 1541-1545, 1992) for the reasons set forth in the previous Office action and the reasons set forth below. (Office action paragraph no. 3)

Reconsideration of the rejection is respectfully requested in view of the amendments to the claims.

The rejection is moot for claims 2, 4, and 8, which have been canceled without prejudice or disclaimer.

With regard to claim 1, the Examiner considers that the peptides shown Table IV of Yokoyama et al. or the fractions A-E described in Yokoyama et al. comprise at most 10% by weight of polypeptides having a molecular weight of at least 5000.

However, the peptides in Table IV described in Yokoyama et al. do not comprise polypeptides having a molecular weight of at least 5000, because the peptides in Table IV are purified. Therefore, the present invention differs from the peptides in Table IV in that the peptides in Table IV do not comprise polypeptides having a molecular weight of at least 5000. Further, the present invention has the different and extremely superior effect of improving bitterness and bad flavor characteristic to purified peptides, by containing at most 10% by weight of polypeptides having a molecular weight of at least 5000.

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The fractions A-E described in Yokoyama et al. are substances obtained in isolating a peptide having ACE inhibitory activity, and comprise solvents which can not be used in processing of a food, such as acetonitrile and trifluoroacetic acid. Therefore, the present invention differs from the fractions A-E in that the fractions comprise solvents which can not be used in processing of a food. Further, Yokoyama et al. merely reports that the peptides having ACE inhibitory activity contained in thermolysin digest of dried bonito were identified, and neither describes nor suggests using the peptides as a food. For this reason, the fractions described in Yokoyama et al. cannot be used as a food, and even if persons skilled in the art refer to the disclosure of these fractions, which does not suggest using the fractions as a food, the present invention relating to a food cannot easily be reached.

Claims 1-4, 7 and 8 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Office action paragraph no. 4)

Reconsideration of the rejection is respectfully requested in view of the amendments to the claims.

The rejection is moot for claims 2, 4, and 8, which have been canceled without prejudice or disclaimer.

With regard to claim 1, the Examiner first indicates that the molecular weight is given with no units, requesting units of "Daltons, kilodaltons, etc." This portion of the rejection is respectfully traversed. "Molecular weight," like "atomic weight", is a **unitless** term, but can be thought of as corresponding to the mass of one **mole** of the substance in grams. (The term "Dalton" is a unit that is used when the mass of one atom or molecule is represented.) Therefore, molecular weight in the present invention does not require a unit,

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as understood from the instant specification, and the measurement of molecular weight by gel filtration chromatography is clearly defined in the specification.

The Examiner also refers to the use of "oligopeptide(s) ..." and "a polypeptide" in claim 1. The rejection is overcome by the amendment to claim 1, in which "a polypeptide" is amended to -- polypeptides--, because there are many polypeptides in the mixture.

Claims 1-4, 7 and 8 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. (Office action paragraph no. 5)

Reconsideration of the rejection is respectfully requested in view of the amendments to the claims.

The rejection is moot for claims 2, 4, and 8, which have been canceled without prejudice or disclaimer.

With respect to "an oligopeptide," claim 1 has been amended to be limited to the oligopeptides of SEQ.ID.NOs. 2-14.

With respect to "polypeptides", Applicants respectfully argue that the present invention is characterized in that the content of many polypeptides having a molecular weight of at least 5000, which are obtained by digesting a fish meat with thermolysin, is reduced to at most 10% by weight of the total hydrolyzate in the mixture, and not characterized by properties of the polypeptides, such as the structure.

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Claims 1, 3 and 7 are rejected under 35 U.S.C. §102(b) as being anticipated by Yasumoto (JP 06-298794). (Office action paragraph no. 6)

Reconsideration of the rejection is respectfully requested in view of the amendments to the claims.

The Examiner has stated that the present invention is identical with an angiotensin conversion enzyme inhibition peptide content solution described in Yasumoto et al. on the basis that Yasumoto et al. describes hydrolyzing the bonito with thermolysin and that the peptide content solution has little bitter tastes. This rejection is traversed on the following grounds.

The thermolysin digest of dried bonito is separated with a column filed **with styrene divinylbenzene copolymers** in Yasumoto et al., and it is separated **with membrane or by solvent extraction with a polar organic solvent** in the present invention. It is well known in the art that from the same starting material subjected to a separation, the separated products differ when the separation methods differ. Therefore, because the present invention differs from Yasumoto et al. in the separation method, it is clear that the present invention differs from an angiotensin conversion enzyme inhibition peptide content solution described in Yasumoto et al.

Reconsideration of the rejections is respectfully requested.

In view of the aforementioned amendments and accompanying remarks, claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the

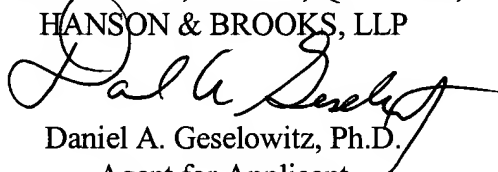
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Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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